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ABSTRACT

A study examined the differences in what boys and girls choose, or are free to choose, to do on the playground during recess. Given the apparent problem that boys dominate the playground area, leaving girls on the perimeter, it was hypothesized that girls engage in passive, non-competitive, small group activities, whereas boys engage in aggressive, competitive, larger group activities thus making their activities traditionally gender stereotyped. Subjects were 170 third- and 232 fifth-grade children, approximately half boys and half girls in each group from two different schools in Danbury (Ohio) and Perkins (Ohio) respectively. Children completed a questionnaire that asked several questions, but only one of which was evaluated: "What is your favorite thing to do at recess?" Results indicated that the top rated activities for third-grade girls were swinging, playing ball, and teeter totter. Third-grade boys chose soccer, basketball, kickball, and swinging. Fifth-grade girls most often chose swinging, walking and talking with friends, and 4-square. Fifth-grade boys chose soccer, football, and swinging. These activities were then rated according to energy expended, competition, and group size. Analyses supported the hypothesis that girls choose passive, non-competitive, small-group activities, whereas boys choose aggressive, competitive, larger group activities. Results suggest that girls' choices were limited; boys tended to choose activities covering a wider range of choices. (HTH)

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Gender Differences

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Gender Differences During Recess in Elementary Schools

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Abstract

The differences in activities chosen at recess by sampling elementary school boys and girls were investigated. Activities were rated for energy expenditure, competition, and group size. The mean scores indicated that recess activities can be rated as traditionally gender-stereotyped. According to computed 't' scores, girls engage in passive, non-competitive, small-group activities. Boys engage in aggressive, competitive, larger group activities. As girls grow older, they continue to follow the stereotypical pattern. However, according to this study, it can not be said that as boys advance in elementary school levels their activities show evidence of becoming more male stereotyped.

Gender Differences During Recess in Elementary Schools

Children's friendships and activities are strongly influenced by gender in the elementary schools. Sex segregation is clearly visible in the school setting and ample research documents differences starting in preschool. Sex-typed activities are so pronounced in the school systems that one can visualize two separate worlds operating 'apart' but 'together'.

Gender systems are static and deliberate. Children choose what they play and with whom. Many segregations occur as the child's choice but many are influenced by peers and adults in the school system under strongly established societal rules. On the playground: space, equipment, and activities are classified by gender. There are times when boys and girls play together, but there are even differences in the way they play the same thing.

Statement of the Problem

Our specific focus of gender differences is what children choose, or are free to choose to do, during outdoor recess at the elementary level in public schools. Most outdoor playgrounds are set up in basically similar ways with differences in size, ground cover, and special equipment. Boys appear to dominate the area, leaving girls on the perimeter of the playground.

Review of the Literature

As reported by Thorne (1992) "playgrounds have gendered turfs, with some areas and activities, such as large playing fields and basketball courts, mainly controlled by boys, and other - smaller enclaves like jungle gym areas and concrete hopscotch and jumprope - more often controlled by girls". In a study by Rosenberg and Sutton-Smith (1960), Maccoby reports "boys (age 9-11) prefer the following games: forceful physical contact, dramatization of conflict between male roles, propulsion of objects through space, and complex team games". In contrast, "girls (age 9-11) prefer: dramatization of 'static activity', verbal games, choral and rhythmic games, and games with central role for one player," (Maccoby, 1974). Thorne supports these findings by adding: "boys tend to interact in larger, more age-heterogeneous groups. They engage in more rough and tumble play and physical fighting. Organized sports are both a central activity and a major metaphor in boys' subcultures: They use the language of 'teams' even when not engaged in sports, and they often construct interaction in the form of contests. In middle childhood, girls' worlds are less public than those of boys: Girls more often interact in private places and in smaller groups or friendship pairs. Their play is more cooperative and turn-taking. Girls have more intense and exclusive friendships, which take shape around keeping

and telling secrets, shifting alliances, and indirect of expressing disagreement."

Male and female roles are clearly marked in many traditional rule-governed games. The labels 'boys' games and 'girls' games' are etched in many activities through generations of players (Finnan, 1982). As an example, football is a boy's game, and jumping rope is a girl's activity. "Boys' games are traditionally aggressive and competitive; girls' games are passive and accommodating. Boys and girls play differently even when they participate in the same game" (Finnan, 1982).

Myra and David Sadker (1994) have spent twenty-five years researching school fairness and it is their findings that we use to elaborate the problem of gender inequity in the schools. They have observed differences in what boys and girls choose to play at school. Boys tend to "become socialized into active, aggressive roles where play is focused in large groups with strict rules. Girls tend to become socialized into passive, non-aggressive roles where play is paired or small-grouped, and unstructured" (Sadker and Sadker, 1994).

Statement of the Hypothesis

Girls' and boys' activities during recess are traditionally gender-stereotyped activities. Girls engage in passive, non-competitive, small group activities. Boys engage in aggressive, competitive, larger group activities.

Further, as girls and boys get older, they continue these stereotypic attributes with even more intensity.

Method

Subjects

Subjects for this study were chosen from two different school districts. A multistage cluster sampling method was used by study two classes each of third and fifth graders from each district. This method was used because the total population was too large. Two separate schools were used for the sample so that any bias relating to playground layout was eliminated. The third grade sample size consisted of four classrooms containing 86 children (43 males, 43 females). The fifth grade sample size consisted of four classrooms containing 91 children (42 males, 49 females). These classrooms were chosen randomly by the guidance counselors of each respective school district. The samples were chosen from the following clusters: total population of third graders was 170 (89 males, 81 females), total population of fifth graders was 232 (111 males, 121 females).

Instruments

A questionnaire was developed by the researchers requiring the children to identify themselves by first name only (to establish gender identity). Several questions were asked but only one question was evaluated for the purpose of

this research: "What is your favorite thing to do at recess?" (See appendix for copy of questionnaire.)

Design

Two existing groups were studied - males and females. No pretest was given to the subjects studied.

Procedure

The questionnaire was given to the elementary guidance counselor in each school. The counselors gave the questionnaire to the homeroom teachers of the classes being sampled. The teachers were instructed to ask the children to use first names only and to write down only one answer to each question. The questionnaires were handed out during school hours and completed within fifteen minutes. The questionnaires were then turned in to the researchers. Immediately the first names were crossed out and replaced with 'M' for male and 'F' for female.

Results

Survey Summary Sheet

Recess activities chosen by the sample were all listed and assigned percentages according to item popularity. The top rated activities for third grade girls were : swinging, playing ball and teeter totter. Third grade boys chose soccer, basketball, kickball and swinging. Fifth grade girls most often chose: swinging, walking and talking with friends, and 4-Square (a game played with a ball on

concrete). Fifth grade boys top rated: soccer, football, and swinging.

Insert Table 1 about here

Activity Rating Summary

All activities selected in the questionnaire were listed in a rating form. Nineteen graduate students rated the activities in three categories using a semantic differential scale from 1-6. Energy expenditure was rated on a passive to aggressive continuum; competition was rated on a non-competitive to competitive continuum; group size was rated from small group to large group.

All activity ratings were summarized and computed with a mean and standard deviation. For example, football (a traditionally male-chosen activity) was rated in the following manner: energy $X=5.8$, s (sample standard deviation) $=0.5$, competition $X=5.9$, $s=0.4$, and group size $X=5.6$, $s=0.7$. Talking with friends (a traditionally female chosen activity) was rated as follows: energy expenditure $X=1.8$, $s=1.0$, competition $X=1.5$, $s=0.8$ and group size $X=2.3$, $s=1.2$.

Insert Table 2 about here

Hypothesis Testing

Individual t-tests were computed to compare differences in gender at same grade level and like gender at different grade levels (3rd & 5th). T-tests were computed in each of the three categories mentioned above. The results can be viewed as follows:

Insert Table 3 about here

There were statistically significant differences in recess activities between boys and girls at the third grade level and at the fifth grade level. In support of the alternative hypothesis, girls chose passive, non-competitive, small group activities. Boys, in general, chose aggressive, competitive, larger group activities.

The means for the girls' activities fell in the 2 and 3 range; the means for the boys' activities ranged between 4 and 5. The means in all three activity areas went down as age went up. The standard deviation for girls was below 1 and the boys had variances between 1 and 1.5. This would

suggest that girls choices were limited; whereas boys tended to choose activities covering a wider range of choices.

The latter part of the hypothesis states that gender stereotypic attributes continue in recess with even more intensity. According to this sample, the *t* scores for girls from third to fifth grade are significant in only two areas. These girls did choose more passive and less competitive activities as they got older. However, it can not be stated that their group size became smaller. Perhaps this could be due to the fact that their first activities chosen were already very small. When analyzing the third to fifth grade boys data, there is no support for the latter part of this hypothesis. Although many boys chose stereotypical activities such as soccer or football, many fifth graders chose swinging (rated as passive, non-competitive, and small group). There was no observation made about any differences in the way boys and girls played on the swings since this research was evaluated by self-reporting questionnaire.

Discussion

The researchers feel there is significant evidence from our sample to support the hypothesis that gender differences do occur at the elementary level in activity choices during recess.

When gathering and analyzing this data, numerous questions have come to light. What role does previous

experience play in these choices that children make? What factor does peer pressure play in these choices? Would girls select 'male activities' if they were not pressured by same sex peers? Would boys choose 'feminine activities'? Why don't boys and girls in these elementary grades play together at recess? Do teachers or playground supervisors influence gender-stereotyped activities? Would children in single-sex schools differ in playground activities? If other activities in school were ungendered (cafeteria seating, teacher choosing sides, boy-girl formation in hall lines), would recess activities become ungendered?

Our research has only satisfied the question of whether differences occur at recess. We were certain they did. This research only supports major research by Sadker and Sadker. We, like them, would like to use these findings to make school personnel aware of differences and help direct activities to influence future activities in school choices. We advocate a school system where gender differences create an educational world of 'togetherness'.

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Appendix

YOUR FIRST NAME _____

1. WHAT IS YOUR FAVORITE SUBJECT? _____

2. WHO ARE THE 5 OVERALL 'BEST' STUDENTS IN YOUR CLASSROOM?
(FIRST NAME ONLY)

1. _____
2. _____
3. _____

4. _____
5. _____

3. WHO WOULD YOU PICK IN YOUR CLASS TO BE YOUR 'LEADER'?
(FIRST NAME ONLY)

4. WHAT IS YOUR FAVORITE 'THING' TO DO OUT AT RECESS?

5. WHAT SCHOOL DAY OF THE WEEK IS YOUR BEST LEARNING DAY?

6. WHAT IS YOUR FAVORITE 'THING' TO DO IN GYM CLASS?

7. IF YOU COULD BE ANYTHING AT ALL, WHAT WOULD YOU LIKE TO
BE WHEN YOU "GROW UP"?

Authors' Notes

We would like to acknowledge Chris Twarek for designing and computing all of the tables in this report.

Table 1

SURVEY SUMMARY SHEET (RAW TALLY SHEET)

Recess Activity	3rd Grade				5th Grade			
	Girls		Boys		Girls		Boys	
	Qty	%	Qty	%	Qty	%	Qty	%
<u>Football</u>			5	11%			8	19%
<u>Walk & Talk w/ Friends</u>	1	2%			14	29%	2	5%
<u>Swing</u>	13	22%	7	16%	18	37%	6	14%
<u>Jump Rope</u>	6	10%						
<u>Play Ball</u>	12	21%						
<u>Play Police</u>			4	9%				
<u>Basketball</u>			8	18%			2	5%
<u>Soccer</u>			9	20%			11	26%
<u>Tetherball</u>							2	5%
<u>Sports</u>			2	4%			2	5%
<u>Draw</u>							1	2%
<u>Frisbee</u>							4	10%
<u>Fight</u>							1	2%
<u>Sit Around</u>							1	2%
<u>Play w/ Friends</u>	6	10%			5	10%	2	5%
<u>Teeter Totter</u>	8	14%			3	6%		
<u>Flip Bar</u>					1	2%		
<u>Run</u>	1	2%			1	2%		
<u>4-Square</u>					6	12%		
<u>Activity</u>					1	2%		
<u>Tag</u>	2	3%	2	4%				
<u>Jungle Gym</u>	5	9%						
<u>Chase</u>	2	3%						
<u>Study</u>	1	2%						
<u>Cartwheels</u>	1	2%						
<u>Kickball</u>			7	16%				
<u>Sports</u>								
<u>War</u>			1	2%				
TOTAL	58	100%	45	100%	49	100%	42	100%

Table 2

ACTIVITY RATING SUMMARY																																			
ACTIVITY	ENERGY EXPENDITURE										COMPETITION										GROUP SIZE														
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10					
SWING	3	3	3	4	2	3	2	3	2	2	2	4	1	3	2	3	2	3	2	3	1	1	1	2	1	2	2	2	2	3					
	3	4	4	4	2	1	4	2	1	1	1	4	2	3	2	1	2	2	1	1	1	2	1	2	2	1	1	1	1	1					
	std. dev.	1.0 average										2.7	std. dev.	1.3 average										2.4	std. dev.	0.6 average									
TALK FRIENDS	1	2	1	4	2	1	1	2	1	1	1	2	1	3	1	1	1	2	1	1	2	2	3	4	1	2	5	2	3	3					
	1	2	1	3	1	3	2	1	1	4	1	1	3	2	1	3	2	1	1	1	1	1	2	4	3	1	3	1	2	1					
	std. dev.	1.0 average										1.8	std. dev.	0.8 average										1.5	std. dev.	1.2 average									
SPORTS	5	5	5	5	4	5	5	5	5	4	5	5	5	5	4	5	5	5	5	4	5	4	5	5	5	5	4	5	4	4					
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
	std. dev.	0.5 average										4.9	std. dev.	0.9 average										5.3	std. dev.	0.9 average									
BASKETBALL	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5	5	5	5	5					
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5					
	std. dev.	0.8 average										5.4	std. dev.	0.6 average										5.7	std. dev.	0.9 average									
JUMP ROPE	2	4	5	5	2	1	2	4	2	3	2	3	3	1	5	1	2	2	1	2	2	2	3	1	3	1	2	2	1	3					
	4	5	5	2	2	4	2	3	1	3	3	4	2	1	3	3	2	1	3	3	2	2	3	4	3	2	3	1	2	2					
	std. dev.	1.7 average										3.3	std. dev.	1.6 average										2.0	std. dev.	0.9 average									
PLAY W/ FRIENDS	3	4	4	4	3	3	3	3	3	4	2	3	2	3	1	4	3	3	3	4	3	3	3	3	5	1	3	3	3	4					
	3	4	4	4	2	4	2	2	2	1	3	2	4	3	2	4	2	1	2	1	2	1	3	3	4	2	2	4	1	2					
	std. dev.	1.1 average										3.2	std. dev.	1.0 average										2.6	std. dev.	1.1 average									
FOOTBALL	6	6	6	6	4	6	6	6	6	6	6	6	6	6	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					
	std. dev.	0.5 average										5.8	std. dev.	0.4 average										5.9	std. dev.	0.7 average									
TETHERBALL	4	6	5	3	4	5	4	0	0	2	5	6	5	2	0	3	4	0	1	3	2	1	2	1	2	1	3	4	2	1					
	5	6	6	4	6	4	4	6	5	4	4	6	6	2	4	6	3	6	6	4	2	3	5	2	4	3	1	5	4	5					
	std. dev.	1.1 average										4.6	std. dev.	1.5 average										4.4	std. dev.	1.4 average									
BIT AROUND	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1					
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1					
	std. dev.	0.2 average										1.1	std. dev.	0.0 average										1.0	std. dev.	0.3 average									
SOCCER	6	6	6	5	5	6	5	6	5	3	6	6	6	6	6	5	5	5	5	3	6	6	6	6	4	6	5	6	5	5					
	5	6	6	6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					
	std. dev.	0.6 average										5.4	std. dev.	0.8 average										5.5	std. dev.	0.6 average									
FIGHT	6	6	6	5	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	6	2	1	2	5	1	1	5	1	3	3					
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	6	6	6	6	6	6	6	6	6					
	std. dev.	0.3 average										5.9	std. dev.	1.1 average										5.7	std. dev.	1.3 average									
FRISBEE	3	3	5	4	3	2	2	2	2	2	2	3	5	4	2	2	2	2	2	2	2	1	2	2	1	2	2	2	2	2					
	2	3	1	5	4	2	3	2	3	1	2	3	1	2	4	3	2	1	2	1	1	1	2	3	3	2	1	2	2	1					
	std. dev.	1.1 average										2.7	std. dev.	1.0 average										2.4	std. dev.	0.6 average									
PLAY POLICE	5	4	4	3	3	4	5	3	3	3	2	4	3	3	2	1	5	3	2	2	4	3	3	3	1	1	5	3	3	3					
	2	3	4	5	6	6	1	4	6	5	1	3	3	3	5	5	1	2	5	4	1	3	2	3	3	5	1	3	2	1					
	std. dev.	1.3 average										4.0	std. dev.	1.3 average										3.0	std. dev.	1.2 average									
DRAW PICTURES	1	1	1	2	1	1	2	1	1	1	1	2	1	2	1	1	2	1	1	1	5	1	3	1	2	1	1	2	1	2					
	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1					
	std. dev.	0.3 average										1.1	std. dev.	0.9 average										1.5	std. dev.	0.8 average									

Table 2

ACTIVITY RATING SUMMARY

ACTIVITY	ENERGY EXPENDITURE					COMPETITION					GROUP SIZE				
	3	4	2	2	2	1	5	2	2	3	1	2	2	1	1
TEETER TOTTER	2	3	2	2	3	2	1	4	1	1	2	1	1	1	1
	std. dev.	0.8	average	2.2	std. dev.	2.2	std. dev.	1.1	average	1.1	average	1.3	std. dev.	0.4	average
	1.3														
FLIP BAR	3	3	3	2	3	4	2	4	3	2	1	2	4	1	1
	std. dev.	1.0	average	2.6	std. dev.	2.6	std. dev.	1.0	average	1.0	average	2.1	std. dev.	0.4	average
	1.2														
RUN	3	5	4	6	5	3	4	5	3	6	4	6	5	4	5
	std. dev.	1.3	average	4.3	std. dev.	4.3	std. dev.	1.3	average	1.3	average	4.3	std. dev.	1.5	average
	2.6														
4-SQUARE	3	4	2	3	5	4	6	5	2	4	6	1	3	6	3
	std. dev.	1.4	average	3.2	std. dev.	3.2	std. dev.	1.4	average	1.4	average	3.2	std. dev.	1.0	average
	3.1														
BE ACTIVE	5	4	5	5	3	3	5	5	5	3	4	5	5	3	5
	std. dev.	1.3	average	3.9	std. dev.	3.9	std. dev.	1.3	average	1.3	average	3.9	std. dev.	1.3	average
	3.0														
TAG	4	5	4	4	2	4	4	3	5	5	6	5	4	3	5
	std. dev.	1.1	average	4.3	std. dev.	4.3	std. dev.	1.1	average	1.1	average	4.3	std. dev.	1.1	average
	4.1														
JUNGLE GYM	3	4	3	1	2	3	2	3	4	2	2	3	3	1	1
	std. dev.	1.0	average	3.2	std. dev.	3.2	std. dev.	1.0	average	1.0	average	3.2	std. dev.	1.1	average
	2.4														
CHASE PEOPLE	4	6	4	6	4	6	4	5	5	3	6	6	5	4	4
	std. dev.	1.1	average	4.0	std. dev.	4.0	std. dev.	1.1	average	1.1	average	4.0	std. dev.	1.2	average
	3.5														
STUDY	1	1	2	2	1	1	1	1	1	1	2	5	2	1	1
	std. dev.	0.9	average	1.5	std. dev.	1.5	std. dev.	0.9	average	0.9	average	1.5	std. dev.	0.7	average
	1.3														
CARTWHEELS	2	3	5	4	4	2	2	3	2	2	3	1	1	2	1
	std. dev.	1.3	average	2.8	std. dev.	2.8	std. dev.	1.3	average	1.3	average	2.8	std. dev.	1.0	average
	1.6														
KICKBALL	4	5	5	4	4	5	5	6	4	5	6	5	6	4	5
	std. dev.	0.8	average	4.8	std. dev.	4.8	std. dev.	0.8	average	0.8	average	4.8	std. dev.	0.8	average
	4.7														
SPORTS	6	5	6	6	5	5	5	6	6	6	6	6	6	6	6
	std. dev.	0.7	average	5.3	std. dev.	5.3	std. dev.	0.7	average	0.7	average	5.3	std. dev.	0.7	average
	6.4														
WAR	6	6	6	5	5	6	6	5	6	6	6	6	6	6	6
	std. dev.	0.6	average	6.6	std. dev.	6.6	std. dev.	0.6	average	0.6	average	6.6	std. dev.	0.7	average
	5.5														
THROW/PLAY BALL	3	4	4	4	2	3	3	4	2	4	3	3	3	2	3
	std. dev.	0.8	average	3.5	std. dev.	3.5	std. dev.	0.8	average	0.8	average	3.5	std. dev.	1.0	average
	2.9														

Table 3

SUMMARY - TESTING OF ORIGINAL HYPOTHESES REGARDING GENDER DIFFERENCE

ASSUMED NORMAL DISTRIBUTION DATA

	3rd Grade						5th Grade					
	Girls			Boys			Girls			Boys		
	Energy	Agression	Group Size	Energy	Agression	Group Size	Energy	Agression	Group Size	Energy	Agression	Group Size
Sample Size	58	58	58	45	45	45	49	49	49	42	42	42
Mean	3.07	2.66	2.24	4.74	4.76	4.29	2.58	2.35	2.09	4.30	4.26	3.80
Std. Dev.	0.66	0.74	0.75	1.01	1.26	1.42	0.61	0.77	0.63	1.53	1.69	1.75
Variance	0.43	0.54	0.56	1.01	1.59	2.02	0.37	0.59	0.39	2.33	2.86	3.05

HYPOTHESIS TESTS

All test the hypothesis that means of the two distributions are different

H_0 : Mean1 = Mean2

H_1 : Mean1 $\neq$ Mean2

using a two-tailed t^* - test

	a=.05 2-tail		Calculated T - Scores					
	df	critical t^* to reject	Test 1 - Energy		Test 2 - Agressive		Test 3 - Group Size	
			t		t		t	
			p		p		p	
Girls 3 > Boys 3	101	1.99	10.02	0.0001	10.49	0.0001	9.32	0.0001
Girls 5 > Boys 5	89	1.99	7.17	0.0001	7.01	0.0001	6.29	0.0001
Girls 3 > Girls 5	105	1.99	-3.93	0.0002	-2.07	0.0184	-1.05	0.1470
Boys 3 > Boys 5	85	1.99	-1.57	0.0583	-1.57	0.0575	-1.43	0.0761